



Energy
Information
Administration

Weekly Coal Production

Production for Week Ended:
December 15, 1990



Production Hits 1 Billion Tons
See State
Coal Profile

Preface

The *Weekly Coal Production (WCP)* provides weekly estimates of U.S. coal production by State. Supplementary data are usually published monthly in two supplements: the Coal Exports and Imports Supplement and the Domestic Market Supplement. The Coal Exports and Imports Supplement contains detailed monthly data on U.S. coal and coke exports and imports. The Domestic Market Supplement contains detailed monthly electric utility coal statistics, by Census Division and State, for generation, consumption, stocks, receipts, sulfur content, prices, and the origin and destination of coal shipments. This supplement also contains summary-level, monthly data for all coal-consuming sectors on a quarterly basis.

Preliminary coal production data are published quarterly, based on production data collected using Form EIA-6, "Coal Distribution Report." Based on 1988 data, the coal production estimation error for a quarter at the national level (i.e., the difference between the sum of the weekly estimates for a quarter and the quarterly EIA-6 preliminary data) ranges from 1 percent to 4 percent.

Final coal production data are published annually, based on the EIA-7A coal production survey. Based

on 1988 data, the revision error for a quarter at the national level (i.e., the difference between the EIA-6 preliminary data and the EIA-7A final data) ranges from 0.02 percent to 0.08 percent.

This publication is prepared by the Coal Division; Office of Coal, Nuclear, Electric and Alternate Fuels; Energy Information Administration (EIA) to fulfill its data collection and dissemination responsibilities as specified in the Federal Energy Administration Act of 1974 (P.L. 93-275) as amended. *Weekly Coal Production* is intended for use by industry, press, State and local governments, and consumers. Other publications that may be of interest are the quarterly *Coal Distribution*, the *Quarterly Coal Report*, *Coal Production 1989*, and *Coal Data: A Reference*.

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Grant Davidson
BHP-Utah Minerals
International

State Coal Profile

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Summary

The Energy Information Administration estimates that year-to-date U.S. coal production as of December 15, 1990, reached 1,003 million short tons, a new plateau for the coal industry. This estimate is based on revised third quarter coal production, as reported on the form EIA-6 "Coal Distribution Report." Data reflecting this revision by State will be presented in a January issue of this report.

In the week ended December 15, 1990, estimated U.S. coal production was 21 million short tons, about the same as in the previous week, and 2 million short tons higher than in the comparable week in 1989. Production east of the Mississippi River totaled 13 million short tons and production west of the Mississippi River totaled 9 million short tons.

Figure 1. Coal Production

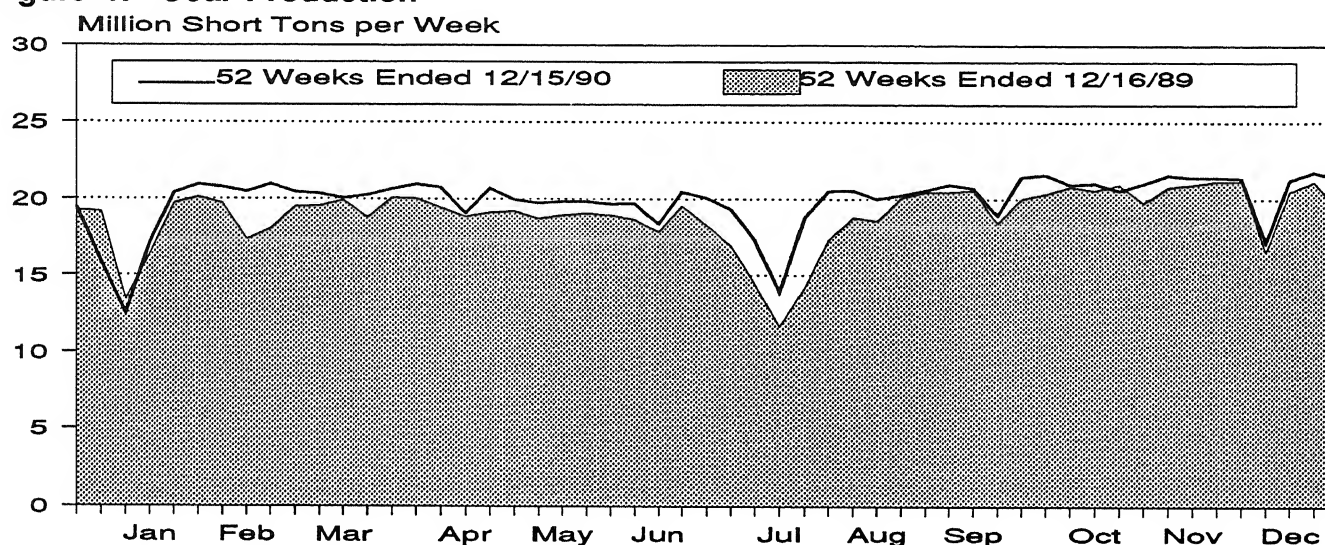


Table 1. Coal Production

	Week Ended	
Production and Carloadings	12/15/90	12/08/90
Production (Thousand Short Tons)		
Bituminous ¹ and Lignite	21,332	21,730
Pennsylvania Anthracite	49	54
U.S. Total	21,381	21,784
Railroad Cars Loaded	136,096	138,531

¹Includes subbituminous coal.

Notes: 1990 data are preliminary. Totals may not equal sum

Sources: Association of American Railroads, Transportation D
Administration, Form EIA-6, "Coal Distribution Report"; Form EIA-
coal production reports.

Table 2. Coal Production by State
(Thousand Short Tons)

Region and State	Week Ended		
	12/15/90	12/08/90	12/16/89
Bituminous Coal¹ and Lignite			
East of the Mississippi	12,573	12,798	11,898
Alabama	603	638	606
Illinois	1,276	1,283	1,209
Indiana	723	750	650
Kentucky	3,470	3,569	3,200
Kentucky, Eastern	2,571	2,576	2,451
Kentucky, Western	899	993	749
Maryland	62	62	62
Ohio	707	725	670
Pennsylvania Bituminous	1,231	1,304	1,390
Tennessee	148	149	148
Virginia	921	922	830
West Virginia	3,431	3,396	3,132
West of the Mississippi	8,759	8,932	7,498
Alaska	31	32	41
Arizona	262	267	230
Arkansas	2	2	2
Colorado	491	421	418
Iowa	8	8	7
Kansas	25	26	23
Louisiana	70	79	68
Missouri	62	63	71
Montana	801	824	723
New Mexico	472	365	488
North Dakota	660	679	539
Oklahoma	40	37	39
Texas	1,194	1,216	1,022
Utah	544	488	479
Washington	107	109	101
Wyoming	3,991	4,317	3,247
Bituminous¹ and Lignite Total	21,332	21,730	19,396
Pennsylvania Anthracite	49	54	61
U.S. Total	21,381	21,784	19,456

¹Includes subbituminous coal.

Notes: 1990 data are preliminary. Totals may not equal sum of components due to independent rounding.

Sources: Association of American Railroads, Transportation Division, Weekly Statement CS-54A; Energy Information Administration, Form EIA-6, "Coal Distribution Report"; Form EIA-7A, "Coal Production Report"; and State mining agency coal production reports.

State Coal Profile: New Mexico

Total Area of State:

121,666 square miles

Area Underlain by Coal:

14,650 square miles

Demonstrated Reserve Base of Coal: (January 1, 1990)

4 billion short tons
(1 percent of U.S. total)

First Year of Documented Coal Production:

1882 (157,000 short tons)

Peak Year of Coal Production:

1989 (24 million short tons)

1989 Coal Production:

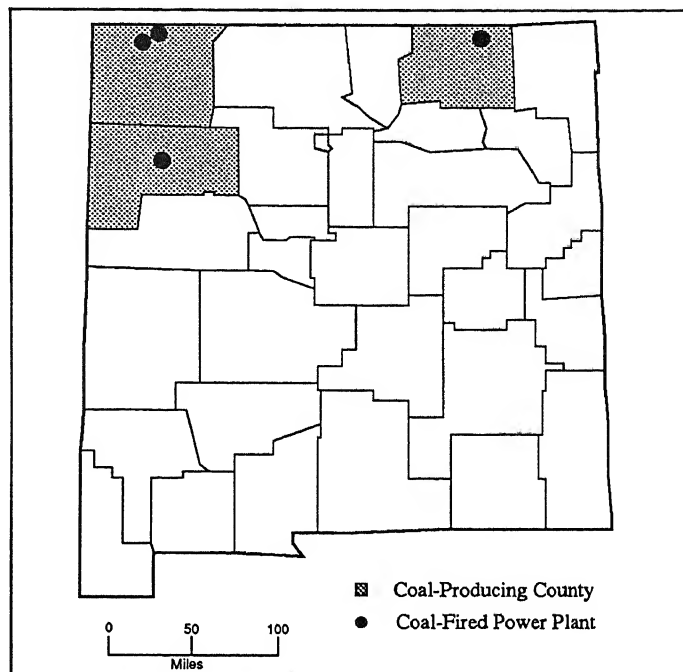
24 million short tons
(2 percent of U.S. total)

1989 f.o.b. Mine Price:

\$23.42 per short ton
(U.S. average = \$21.82)

1989 Coal Consumption:

15 million short tons
(2 percent of U.S. total)



	<u>Number</u>	<u>Percentage of U.S. Total</u>
Number of Mines (1989)	8	<1
Underground	1	<1
Surface	7	<1
Number of Miners (1989) (at mines producing more than 10,000 short tons)	1,470	1
Underground	49	<1
Surface	1,421	3
Average Quality of Utility Coal Receipts (1989)	<u>New Mexico</u>	<u>U.S. Average</u>
Heat Content (million Btu per short ton)	18.3	20.9
Sulfur Content (percent by weight)	0.8	1.3
Ash Content (percent by weight)	21.4	9.9

Coal is one of four mineral fuels produced in New Mexico. The value of the 24 million short tons of coal produced in 1989 was more than \$500 million. This was about 12 times larger than the value of uranium production, but it was overshadowed by the value of natural gas (including coalbed methane) and crude oil production, which at \$1.4 and \$1.2 billion, respectively, were by far the State's two leading mineral commodities. Royalties from coal production from Indian and Federal leases in 1989 totaled about \$27 million and \$19 million, respectively. In addition to receiving half of the royalties from Federal coal leases, New Mexico also received \$46 million from coal taxes and over \$466,000 in royalties and rentals from State coal leases.

The principal coal-bearing areas in New Mexico are the San Juan and Raton basins, both in the northern part of the State. The San Juan Basin, the larger of the two, covers nearly 12,000 square miles of San Juan and McKinley counties and extends into Colorado. It contains most of the coal reserves and is the major source of coal production. It is also currently the only basin in the State with coalbed methane production. San Juan Basin coal ranges in rank from subbituminous in the south to bituminous in the north. The heat content ranges from 17 to 22 million Btu per short ton, with the coal produced averaging more than 18 million Btu per short ton. The sulfur content generally is less than 1 percent by weight, and the ash content averages slightly over 20 percent. Most of the output is from the Fruitland Formation, which contains several coalbeds. The beds mined are generally 4 to 13 feet thick, but in places reach a thickness of nearly 30 feet. Estimates of the coalbed methane resource in the basin range as high as 84 trillion cubic feet.

The Raton Basin underlies part of Colfax County and also extends into Colorado. Raton Basin coal is bituminous in rank and includes some of metallurgical grade. Production is from beds averaging over 5 feet in thickness. Raton Basin coal has a high heat content, averaging about 25 million Btu per short ton, and generally contains less than 1 percent sulfur and 10 to 12 percent ash. The basin's coalbed methane resource is estimated to total as much as 18 trillion cubic feet.

Small amounts of the coal in New Mexico reportedly were used several centuries ago by Spanish explorers, and in the 1860's by the U.S. Army at Fort Craig, near present-day Socorro. Coal mining developed on a commercial scale to meet the energy and heating needs of the railroads, metallic ore smelters, domestic and commercial users, and small power plants. Until the mid 1920's, some coal was converted into coke in beehive ovens, principally for use in smelting copper. Around the same time,

small amounts of coal from the Raton field were also used to manufacture coal gas.

At the turn of the century, New Mexico's coal production reached about 1 million short tons per year. Coal became one of the State's most valuable mineral commodities. Output rose to more than 4 million short tons in 1918 and then slackened as many mines closed, due chiefly to competition from natural gas and crude oil produced in New Mexico and in neighboring States. Over the next 40 years, production trended downward, eventually falling below 1 million short tons in the 1950's and early 1960's. In the late 1960's, the State's coal industry was revitalized with the opening of large mines to supply fuel for new coal-burning power plants built in New Mexico and Arizona to meet the growing demand for electricity in the Southwest. Coking coal was mined in the Raton Basin until 1986, primarily to supply a coke plant in California, although small amounts were also shipped to Texas.

Coal production climbed to 7 million short tons in 1970, more than doubled in 1980, and set an all-time record of 24 million short tons in 1989, which ranked New Mexico 13th among the 27 coal-producing States. Of the total coal produced in 1989, more than 13 million short tons were from Indian coal leases, about 6 million short tons were from Federal coal leases, and the balance was from State and private lands. At year-end 1989, about 77,000 acres of Indian land were leased for coal production, compared with 14,000 acres of Federal land. Coalbed methane production in New Mexico, all from the San Juan Basin, has been significant since the mid 1980's, with the cumulative output through 1989 totaling over 100 billion cubic feet.

Underground mines were the chief source of coal production in New Mexico until the mid 1960's, when large surface mines were opened. Virtually all of the 1989 coal output was from six surface mines in the San Juan Basin. One underground mine and one surface mine operated in the Raton Basin. Three of the mines in the San Juan Basin ranked among the Nation's largest coal producers. These were the Navajo and San Juan mines of BHP-Utah Minerals International, Incorporated, which produced about 9 million short tons and 5 million short tons, respectively; and the McKinley mine of Pittsburg & Midway Coal Mining Company, which produced about 6 million short tons. Coal miner productivity at New Mexico's surface mines in 1989 averaged 8 short tons per hour, slightly higher than in neighboring Arizona and Colorado. The only coal cleaning plant in operation in 1989 was in the Raton Basin.

Most of the 24 million short tons of coal produced in New Mexico in 1989 was used to generate

electricity. About 15 million short tons were delivered to power plants in New Mexico, with nearly all of the balance shipped to power plants in Arizona. A small amount was used for other purposes in New Mexico, mainly for cement production. In 1989, New Mexico's coal consumption ranked 22nd among the States.

New Mexico's four coal-fired power plants have a combined net summer electric generating capability of 3,894 megawatts (MW), which accounts for about three-fourths of the State's total. Their share of total electricity generation has increased from less than 80 percent in 1980 to about 90 percent in 1989, when it rose to a record 25,446 gigawatthours. Two of the State's coal-fired power plants rank among the largest in the West. They are the 2,038 MW Four Corners plant of the Arizona Public Service Company and the 1,614 MW San Juan plant of the Public Service Company of New Mexico. Both are minemouth power plants, located near the Navajo and San Juan mines, respectively. Fly ash from the plants is returned to the mining areas as part of the reclamation process.

Looking ahead, coal production in New Mexico is projected to remain at about 24 million short tons in 1990 and 1991. The level of coal production chiefly reflects the demand for electricity in the region. A constraint on coal-fired electricity generation in the State since the mid 1980's has been the Palo Verde nuclear power plant, located near Phoenix, Arizona, and operated by the Arizona Public Service Company. With a net summer generating capability of 3,663 MW, Palo Verde is the Nation's second-

largest power plant after the Grand Coulee hydroelectric plant in Washington. However, surplus coal-fired generating capability in New Mexico is available to offset shortfalls in electricity production in the West. In recent years, it has provided additional electricity when the Palo Verde plant was being repaired and refueled, and when hydroelectric generation in the Pacific Northwest was reduced due to drought conditions.

References

Energy Information Administration: *Coal Production* (various issues); *Quarterly Coal Report* (various issues); *Coal Distribution January-December 1989* (April 1990); *Cost and Quality of Fuels for Electric Utility Plants 1989* (July 1990); *Inventory of Power Plants in the United States 1989* (August 1990); *Electric Power Annual* (various issues); *Electric Power Monthly*, December 1989 (March 1990). New Mexico Energy, Minerals, and Natural Resources Department: Kay Hatton and Douglas Bland, personal communications (1990); *New Mexico Coal Fact Sheet* (August 1990); *Annual Resources Report* (1988 and 1989 Update). U.S. Department of the Interior: Minerals Management Service, *Mineral Revenues 1989: Report on Receipts from Federal and Indian Leases*; Bureau of Mines, *State Mineral Summaries 1990*. 1989 *Keystone Coal Industry Manual*, Maclean Hunter Publishing Co. (Chicago, IL); "The United States Coalbed Methane Resources," *Quarterly Review of Methane from Coal Seams Technology* (March 1990). Story of Mining in New Mexico, *Geologic Past*, No. 12, and Mineral Resources



The Navajo Mine Railroad links the Navajo mine and the Four Corners power plant. Coal from the mine is transported to the storage area in 160-ton coal haulers and then loaded into railroad cars by 25-ton front-end loaders.

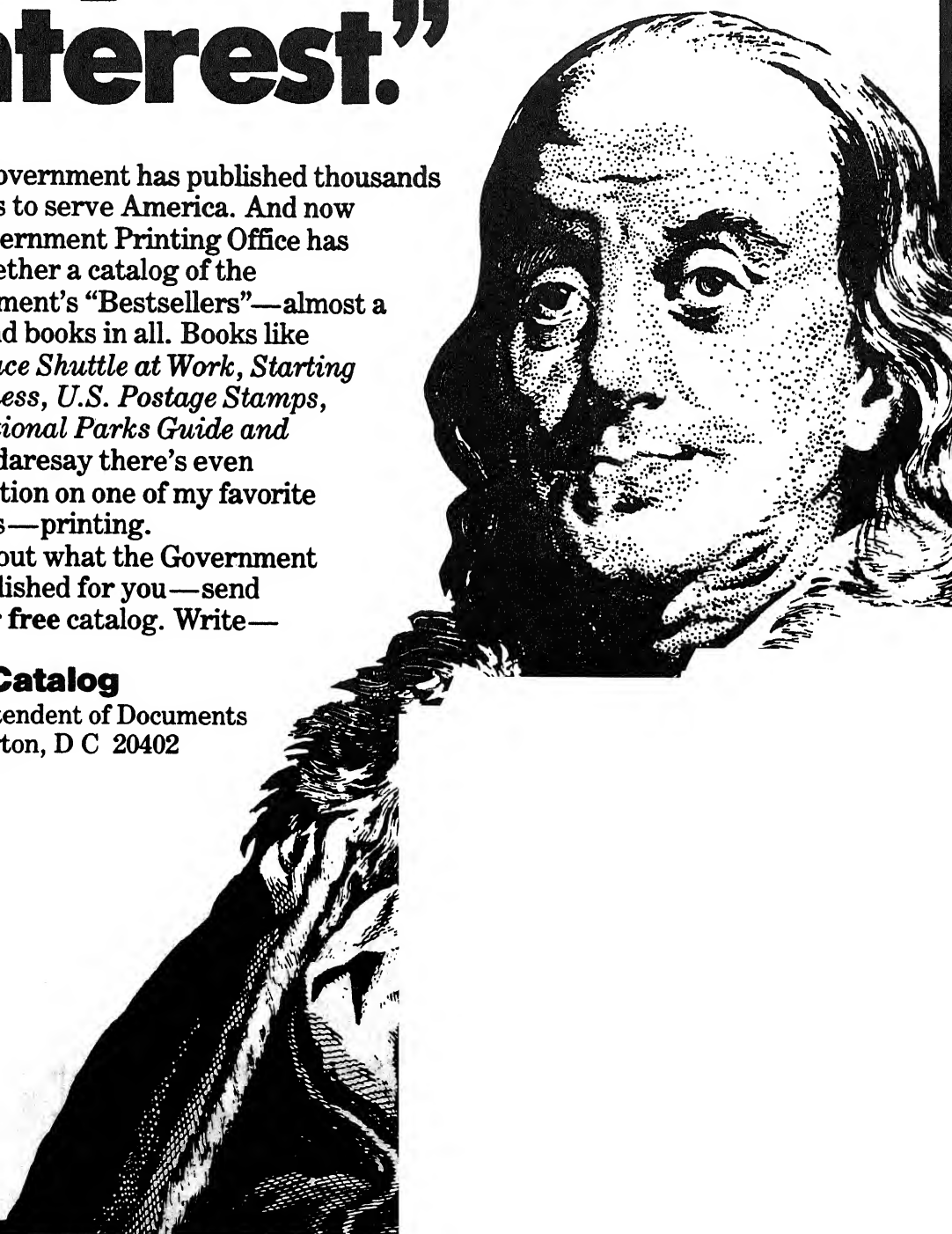
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